

PATENT ABSTRACTS OF JAPAN

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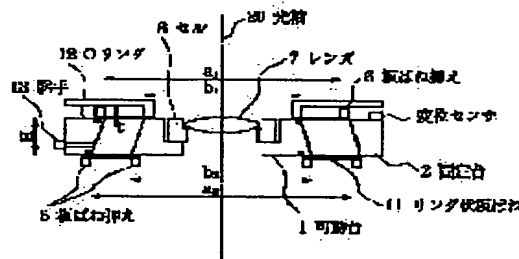
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MIZUNO MAKOTO
EBINUMA RYUICHI

(54) DRIVING APPARATUS, OPTICAL ELEMENT DRIVING APPARATUS, ALIGNER, AND MANUFACTURE OF DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To axially drive a movable section with high accuracy by supplying a fluid into a space surrounded by first and second members and first and second plate members or discharging the fluid of the space.

SOLUTION: An optical element moving mechanism has an adjusting lens 7 for adjusting magnification, aberration, and the like, a movable table 1 having a cell 8 for supporting the lens 7, and a fixed table 2 forming a part of a fixed section of a projection optical system. The tables 1 and 2 have generally cylindrical configurations. A ring-shaped flat spring 11 is fixed to be sealed into both end faces of the tables 1 and 2 using an O-ring 12 and flat spring presser bars 6. There is at least one hole in the table 2, whereby the position of a movable section is changed by a change in the pressure or volume of a driving fluid. Since the apparatus has a drive structure where fluctuations of the fluid via a coupling 18 are utilized, the fluid needs to be sealed into a space sandwiched by the spring 11, and the tables 1 and 2. The ring 12 is fitted into a groove formed in the table 1 or 2 and sealed by the presser bars 6. Each presser bar 6 is of annular shape.



LEGAL STATUS

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09.09.2003

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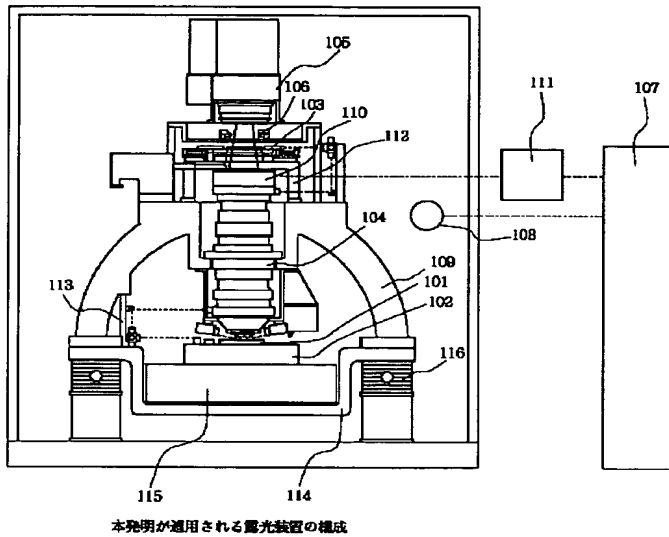
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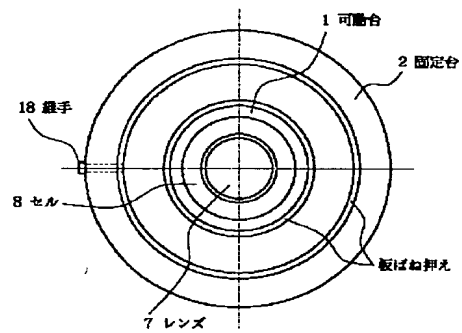
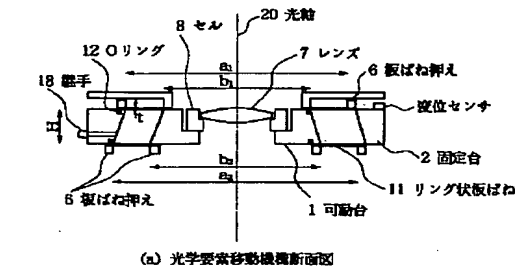
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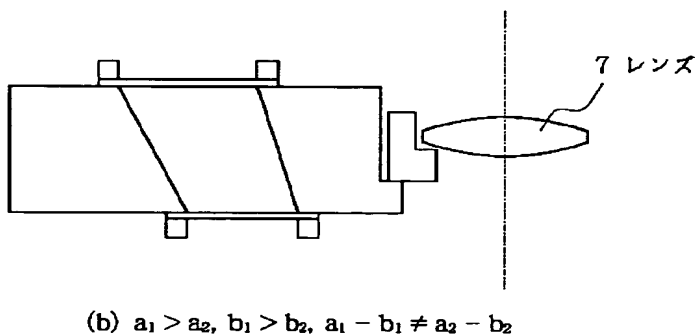
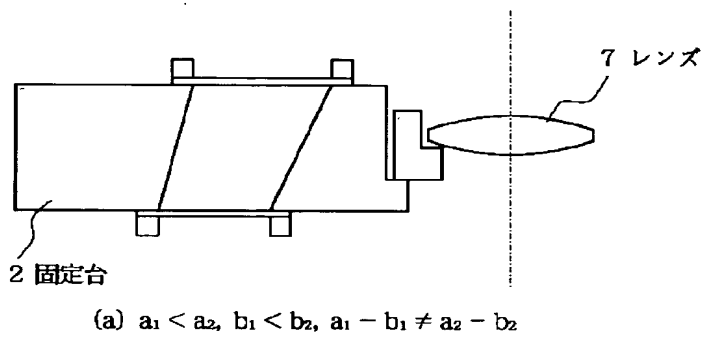
【図1】



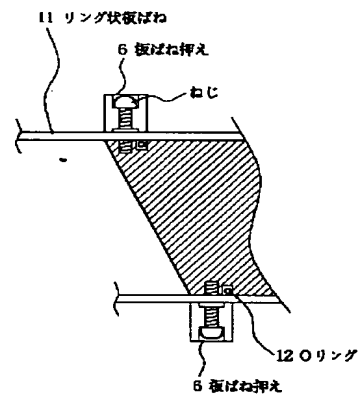
【図2】



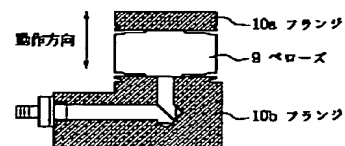
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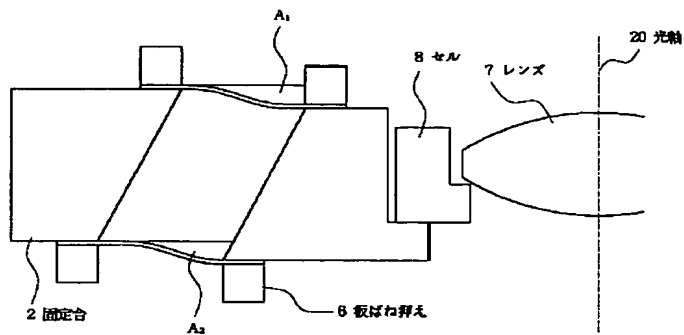
【図7】



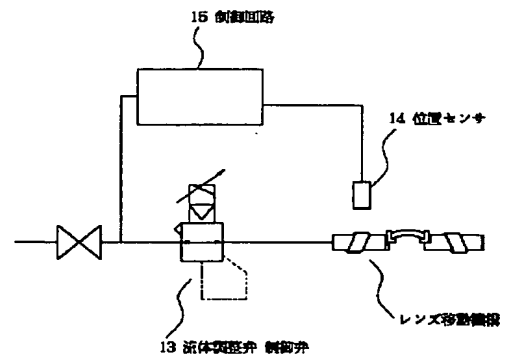
【図18】



【図4】

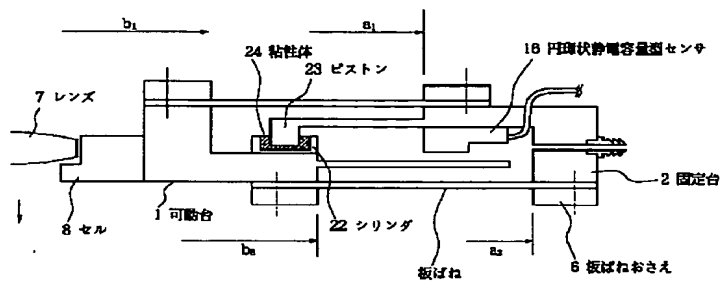


【図8】



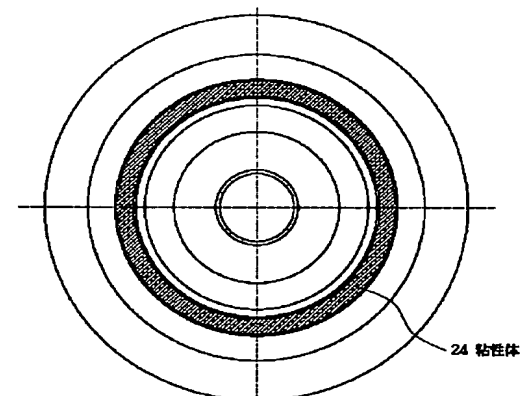
制御方法概要

【図5】

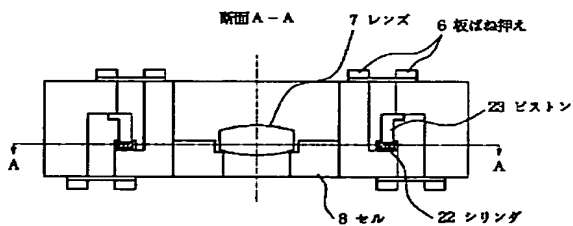


ダンパの配置

【図6】

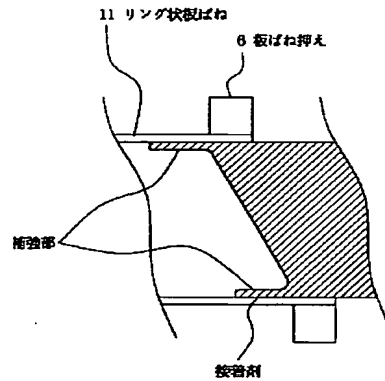


断面A-A



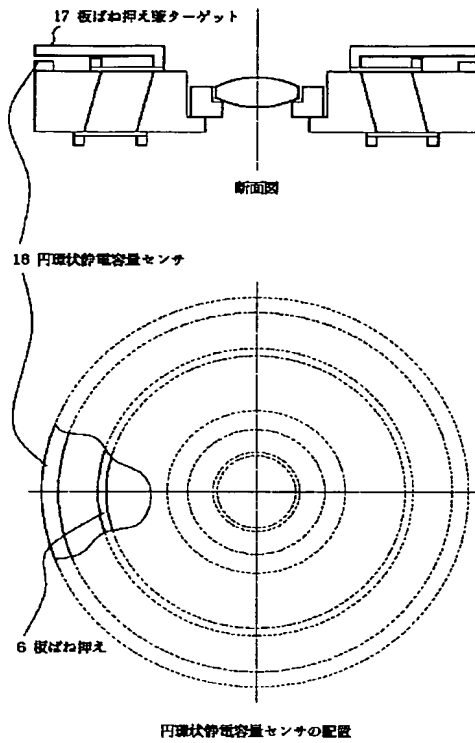
円周状に配置したダンパ

【図9】

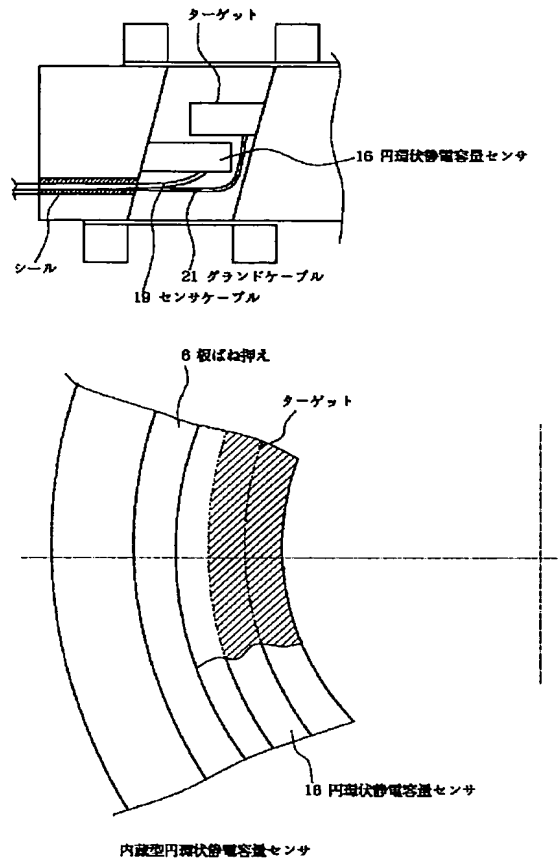


板ばねの応力緩和の概要

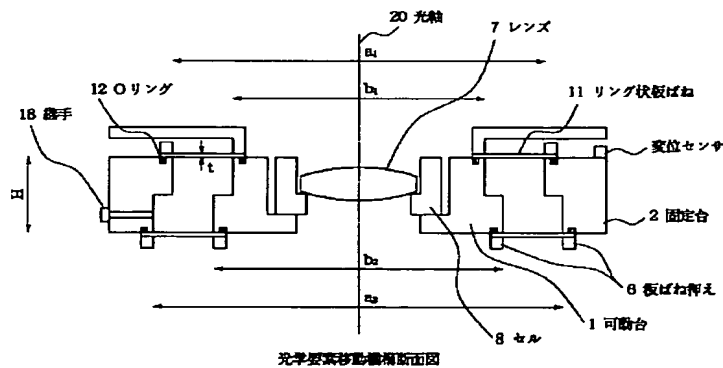
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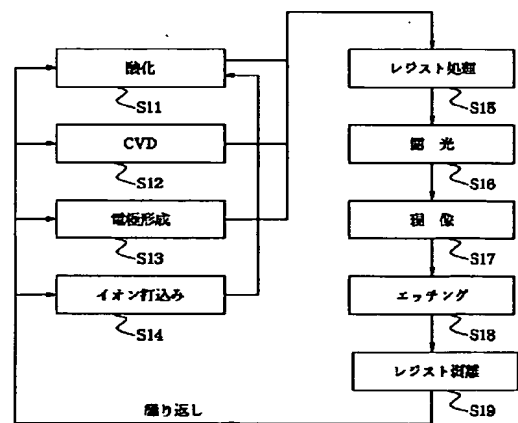
【図11】



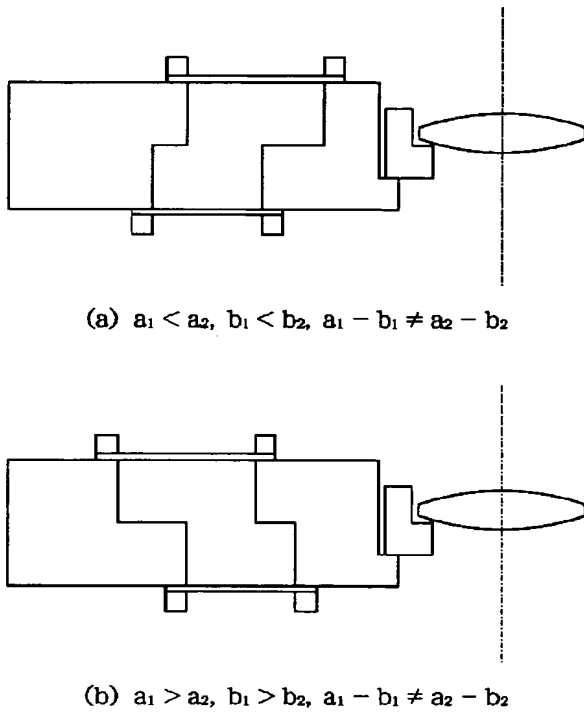
【図12】



【図16】

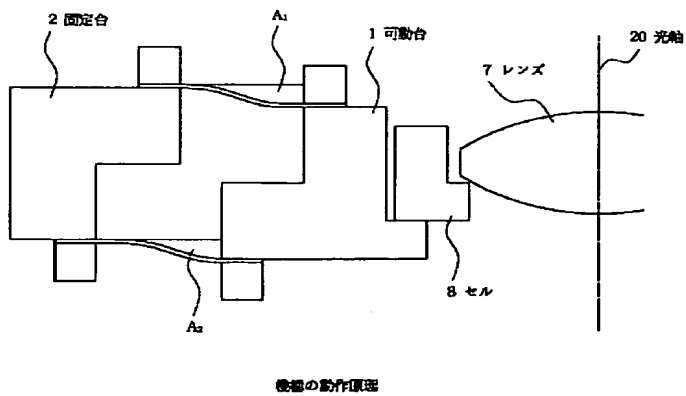


【図13】

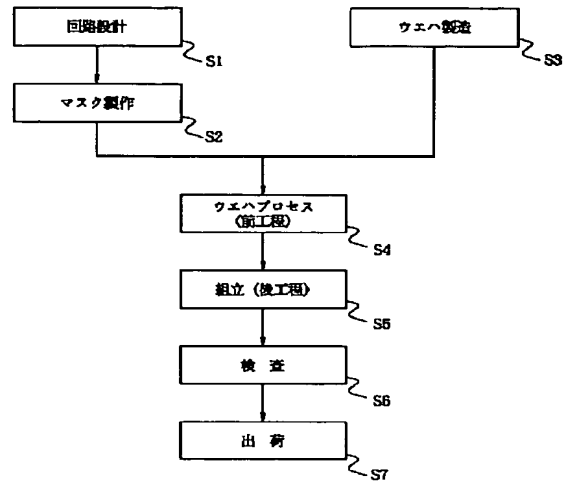


板ばねの長さ

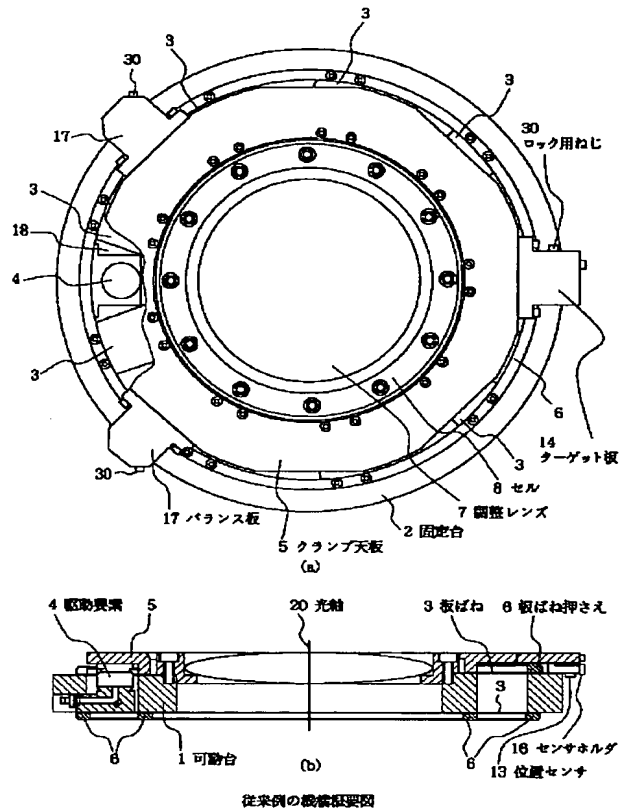
【図14】



【図15】



【図17】



フロントページの続き

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5F046 AA23 CB12 DA12 DB04 DB07